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Liabilities and Responsibilities of the Construction Manager for Implementation and Management of the Safety Program

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ABSTRACT

Safety on a construction project has traditionally been the responsibility of the contractor, since he was in the best position to direct and enforce the safety program. The general contractor would provide the direction and coordination of the subcontractors, each of which was responsible to the general contractor for their individual safety programs and efforts.

With the advent of construction management, the owner began contracting directly with the prime contractors, eliminating the need for the general contractor. Most agreements between the owner and contractors continued to assign responsibility for safety to the contractors, as was the case under the traditional approach to construction.

Although this may at first appear to cover the issue of safety on the project site adequately, there are two areas of concern that are evident upon closer inspection. First, absent the general contractor, who will provide the direction and coordination of the independent prime contractors in their safety efforts? Second, what role should the construction manager play in the overall project safety program?

The first part of this report looks at the role the construction manager has assumed in the management of safety on the construction site. From a review of standard forms of agreements used by construction management (CM)

firms, and the results of a questionnaire examining the practices of existing CM firms, it is evident that in an effort to avoid liability for safety, many CM firms are taking a position of minimal involvement in the safety program. The firms seem less concerned with providing a safe workplace than they do with avoiding liability. They have not fully considered the impact such a stance has on the effectiveness of the safety program. By excluding themselves from safety responsibilities, they have virtually eliminated the overall supervision and management of project safety, a necessary element of any accident prevention program.

The second part of this report examines the legal and administrative safety environment the construction manager operates in. The purpose of this review is to examine the validity of the assumption that a position of minimal involvement in the project safety effort is the best shield to the incurrence of liability for safety by the construction manager. A review of legal precedence established in applicable court cases, and Occupational Safety and Health Administration (OSHA) requirements, indicates that such an assumption is invalid and can prove disastrous to the construction manager. Both the courts and OSHA place a great deal of emphasis on the reasonableness of the actions of parties under investigation. By assuming a position of minimal

involvement, when a higher standard of care should have been exercised, the construction manager may find himself guilty of professional negligence.

The final section of this report analyzes a number of approaches to safety that the CM firm can employ. The "CM direction" approach, in which the CM actively directs a site-wide safety program for the benefit of all contractors and employees, was considered to be the the most effective and economical safety program of all the alternatives. A number of responsibilities were identified for the construction manager under this approach. The most important include those services which cannot be adequately provided by the independent prime contractors.

Looking at all of the aspects of safety management covered in this report, it is apparent that the construction manager should take a position of maximum involvement in the safety effort. Maximum involvement will provide a means of defending against increased liability exposure, a more comprehensive management package to owners, and increased economic and social returns inherent in an effective safety program.

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Chapter 1

INTRODUCTION

The background for this report is developed in this chapter. First, the economic impact of safety and the incentive for management attention to the development of a comprehensive safety program is presented. Second, the need for the involvement of the construction manager in the development and administration of the safety program is established.

Construction Safety

Construction sites are dangerous and hazardous places to work. U.S. Department of Labor and National Safety Council Statistics indicate that construction employees sustain 250,000 to 300,000 lost time injuries and 3000 work related fatalities per year. This accounts for 12 percent of all occupational injuries and illnesses and 19 percent of all work related fatalities respectively. Costs incurred by the construction industry as a result of these accidents and fatalities is considered to be approximately $5 billion to $10 billion per year (1).

Economic Impact

There are three types of costs which must considered when assessing the economic impact of accidents on a construction site:

1) Direct costs of accidents and insurance

2) Indirect costs of accidents

3) Costs of safety program

Direct Costs

The direct costs of accidents are easily identified and include such things as medical costs and premiums for workmen's compensation benefits, liability and property losses. Most contractors carry insurance to cover workmen's compensation. The cost of such insurance is based on the contractor's Experience Modification Rate (EMR) and the type of work performed. EMR's typically range from 50 percent to 205 percent, depending on the contractor's safety record. A contractor with an EMR of 50 would pay about $1,054,500 per $100 million of total project cost for workmen's compensation insurance compared to $4,323,450 paid by a contractor with an EMR of 205. "Premiums for worker's compensation range from 6 to 30 percent of labor costs, and labor costs are typically 25 percent of project costs" (2). A contractor's superior safety record is potentially worth millions of dollars in reduced insurance costs on a major project.

Indirect Costs

Most managers are aware of the direct costs associated with accidents to workers. Not so readily identifiable are

the indirect costs of accidents. Indirect costs identified by Heinrich are as follows (3):

1) Cost of lost time of injured employee.

2) Cost of time lost by other employees to stop work:

a) Out of curiosity.

b) Out of sympathy.

c) To assist injured employee.

d) For other reasons.

3) Cost of time lost by foreman, supervisors or other executives as follows:

a) Assisting injured employee.

b) Investigating the cause of the accident.

c) Arranging for the injured employee's production to be continued by some other worker.

d) Selecting, training, or breaking in a new worker to replace the injured worker.

e) Preparing state accident reports, or attending hearings before state officials.

4) Cost of time spent on the case by first-aid attendant and hospital department staff, when not paid for by the insurance carrier.

5) Cost due to damage to the machine, tools, or other property.

This list is not comprehensive, but it serves to describe the effect an accident has on the construction effort in terms of indirect costs. These indirect costs are often not considered by management when assessing the economic impact of accidents. For this reason, the true costs of accidents are underestimated. Indirect costs account for a greater portion of the overall costs of accidents than do the direct costs.

A number of studies have been conducted to identify the ratio of the indirect costs of an accident to the direct costs. The results of a few of these were summarized in a technical report by Michael R. Robinson which proposed the use of accident cost accounting as a means of improving construction safety (2). The results of these studies indicate that the ratio of indirect costs to direct costs is between 4 to 1 and 7 to 1. One in-house study performed by a construction company reported a ratio as high as 17 to 1. These studies indicate that the costs of accidents are probably much greater than those currently recognized or reported to management.

One of the objectives of a safety program is to reduce profit-loss and increase profit potential (4). Profit making is rarely associated with safety. In fact, safety is normally considered a negative aspect of maximum production. However, the figures provided earlier indicate the potential for substantial savings with minimum

investment. Safety should be considered as part of the profit making or losing process, along with the traditional considerations such as production, advertising and merchandising. It has been estimated that $1 invested in safety and health pays $4 to $8 in return (1). It is no surprise that many of the construction industry's more profitable firms and productive workers have excellent safety and health records.

Safety Management

Most accidents on construction sites are preventable through implementation of an effective safety program. Unsafe conditions and accidents are usually a sign that something is wrong in the management system. Safety must be managed in the the same way that other aspects of a project are managed (5). Planning, organizing, staffing, controlling and leading are all functions of management which must be employed in the establishment and management of a safety program.

The Occupational Safety and Health Act of 1970 requires that all employers furnish their employees with a place of employment that is free from recognized hazards that may cause death or physical harm. Unfortunately, safety is often neglected on construction sites and rarely managed. Safety is often discussed in management meetings as a top priority, but in reality usually takes a back seat to other management responsibilities and functions. The

loss, in terms of human pain and suffering, is tragic, but the losses also take the form of reduced profits that might have been realized if a more effective safety program were implemented.

Safety and Construction Management

Traditionally the responsibility for the project safety program was borne by the general contractor. This was the logical choice, since the contractor had full control of the means, method, sequences, procedures and techniques employed on the construction site, as well as coordination of the various trades and subcontractors involved in the construction effort.

With the advent of construction management and the use of a number of individual prime contractors on a project, the overall coordination and supervision of the construction effort became a responsibility of the construction manager. However, in most cases, the contract language employed in the construction management agreements still held the contractors solely responsible for the safety of their employees, but did not indicate who would provide the overall management of the project safety program.

Unless the owner has in-house capabilities to provide safety supervision, coordination and inspection of multiple prime contractors, the architect/engineer and/or the construction manager will be expected to provide those

services. Since architects have been increasingly unwilling to perform supervisory and inspection duties, the owner may reasonably expect the construction manager to assume responsibility for safety management.

Objectives

The first objective is to identify the prevailing attitudes and practices of the construction manager with regard to safety program management and the reduction of liability for safety by the construction manager. This will be accomplished through a review of contract language used in standard forms of agreement employed by CM firms, as well as the results of a questionnaire sent to several CM firms, asking them to identify their safety practices.

The second objective of this report is to determine how appropriate such attitudes and practices are in light of legal precedence and OSHA requirements. Alternate approaches to safety program management, in light of elements necessary for an effective safety program, and the legal and administrative climate indicated in the previous sections are prescribed.

Summary

Safety on the construction site should be of primary concern to all members of the construction team. Although often recognized as an important area for humanitarian reasons, construction managers and owners should be aware

of safety's potential influence on the profitability of the construction undertaking.

Traditionally, responsibility for the safety program has been assigned to the general contractor, since he is responsible for all construction services including the coordination, supervision and management of all subcontractors. When using the construction management approach to construction, the general contractor is no longer necessary as contracts are awarded directly between the owner and the prime contractors. In an effort to reduce liability exposure, architect/engineers and construction managers have attempted to avoid assuming supervisory and inspection roles vacated by the exclusion of the general contractor. However, most owners recognize the need for such roles and cannot provide those services with their own personnel. If construction management is to remain a viable approach to construction, the construction manager cannot avoid assuming some responsibility for supervision, coordination and inspection.

Based on the above, two assumptions are postulated which provide a basic framework from which this study is conducted:

1) Safety is both an economic and a humanitarian concern that must be properly managed.

2) Due to the nature of their role in the management of the construction project, construction managers cannot

avoid some degree of responsibility and liability for job site safety.

Chapter 2

STANDARD FORMS OF AGREEMENT

Standard forms of agreement used by construction management firms, provide some indication of the extent of involvement and responsibility the firms are willing to assume for management of the safety program.

In this chapter, the various standard forms of agreement will be reviewed to determine the extent of the safety responsibility of the construction team members as defined by the contract language found in these agreements. Although it is not the only factor considered by the courts, the contract language still remains a determinant in the adjudication of claims, as it is the least subjective device for defining the roles and responsibilities of the contracting parties. The emphasis of the review will be clauses which specifically discuss safety, as well as those clauses which indicate the degree of supervision and control afforded to the construction manager.

Clauses indicating assignment of supervisory responsibilities to the CM are included since such control may imply an inherent responsibility on the part of the CM to ensure that adequate safety precautions are observed on the job site. It is questionable whether the construction manager can adequately perform all of the responsibilities assigned to him and not in some way be partially

responsible for the construction process. Since the construction process includes all necessary safety precautions, if it can be shown that the construction manager is actively involved in and does share some responsibility for the construction process, he may also be found to be responsible for the associated safety effort.

American Institute of Architects (AIA)

The AIA construction management agreements are designed for use when the construction manager is an independent third party acting as an agent of the owner, and the owner contracts directly with several prime or trade contractors. There are four different agreements associated with the overall construction effort:

1) AIA B801 Standard form of agreement between owner and construction manager.

2) AIA A201/CM General conditions of the contract for construction.

3) AIA A101/CM Standard form of agreement between owner and contractor.

4) AIA B141/CM Standard form of agreement between owner and architect.

AIA B801 Owner/CM Agreement

Coordination of the prime contractors is clearly a responsibility of the construction manager. Section 1.2.2.

of the agreement states that during the construction phase, the construction manager will:

> Provide administrative, management and related services as required to coordinate work of the contractors with each other and with the activities and responsibilities of the construction manager, the owner and the architect to complete the project in accordance with the owner's objectives for cost, time and quality (6).

However, as indicated in Section 1.2.7.1 the construction manager is not responsible for construction means, methods, techniques, sequences or procedures employed by the contractors.

With regard to safety, Section 1.2.4 of the agreement indicates that the construction manager will:

> Review the safety programs developed by each of the contractors as required by their contact documents and coordinate the safety programs for the project(6).

This is the only portion of the agreement which mentions safety.

Although none of the contract clauses require the construction manager to provide continuous or comprehensive inspection of the construction effort, many of the requirements of the agreement would seem to necessitate a fairly active inspection program by the construction manager. A few of these requirements are:

1) Endeavor to achieve satisfactory performance by each of the contractors.

2) Develop and implement procedures for review and processing of applications by contractors for progress payments.

3) Determine, in general, that the work of each contractor is being performed in accordance with the requirements of the contract documents. Guard the owner against defects and deficiencies in the work.

4) Record progress of the project. Maintain a daily log containing a record of weather, contractors' work on the site, number of workers, work accomplished, problems encountered, and other relevant data as the owner may require.

AIA B141/CM, Owner/Architect Agreement

The architect's duty with respect to inspection of the work during the construction phase is defined in Section 1.5.4 of this agreement as follows:

> The architect shall visit the site at intervals appropriate to the stage of construction, or as otherwise agreed by the architect in writing, to become generally familiar with the progress and quality of work and to determine in general if work is proceeding in accordance with the contract documents. However, the architect shall not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of work (7).

Article 1.5.5 further defines the role of the architect by indicating that, like the construction manager, he is not responsible for construction means, methods, techniques, sequences or procedures. However, this article also

indicates that the architect is not responsible for safety precautions and programs in connection with the project or for the construction manager's obligations as the agent of the owner.

AIA A201/CM General Conditions

Many of the requirements and responsibilities of the construction manager and the architect are reiterated in this contract document. However, there appears to be a conflict between this agreement and the agreement between the owner and the construction manager (AIA B801). Section 2.3.5 of AIA A201/CM indicates that neither the architect nor the construction manager will be responsible for safety precautions and programs in connection with the work. AIA B801 however, requires the construction manager to review and coordinate the safety programs for the project.

The contractor's supervisory responsibilities in relation to the construction manager are found in Section 4.3.1:

> The contractor shall supervise and direct the work, using the contractor's best skill and attention. The contractor shall be solely responsible for all construction means, methods, techniques, sequences and procedures; and shall coordinate all portions of the work under the contract, subject to the overall coordination of the construction manager (8).

The issue of responsibility for coordination between the individual prime contractors on the job site is addressed in Section 6.1.3:

> The owner will provide for coordination of the work of the owner's own forces and of each separate contractor with the work of the contractor, who shall cooperate therewith as provided in Paragraph 6.2 (8).

Article 10 is entirely devoted to the protection of persons and property. The responsibility for safety precautions and programs is entirely the contractor's:

> The contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the work (8).

Associated General Contractors of America (AGC)

The AGC construction documents which are addressed in this section are those that are designed for use when the construction manager is an independent third party and the owner is awarding and entering into contracts for construction directly. There are three documents generally associated with the construction effort:

1) AGC 8d Standard Form of Agreement Between Owner and Construction Manager.

2) AGC 520 General Conditions for Trade Contractors Under Construction Management Agreement.

3) AGC 5 Standard Subcontract Agreement for Building Construction.

AGC 8d Owner/CM Agreement

The construction manager's responsibilities for project control during the construction phase are identified in Section 2.2 as follows:

> Monitor the work of the trade contractors and coordinate the work with the activities and responsibilities of the owner. Maintain a competent full time staff at the project site to coordinate and provide general direction of the work and progress of the trade contractors on the project (9).

The provision of facilities by the construction manager, for items not provided by the trade contractors or the owner, is further addressed in this section and indicates that the construction manager will provide all supervision, labor and materials necessary for completion of those items.

Safety is addressed in Section 2.2.8 of the agreement as follows:

> Review the safety programs of each of the trade contractors and make appropriate recommendations. In making such reviews, he shall not be required to make exhaustive or continuous inspections to check quality of work, safety precautions and programs in connection with the project. The performance of such services by the construction manager shall not relieve the trade contractors of their responsibilities for performance for the work and for the safety of persons and property, and for compliance with all federal, state and local statutes, rules, regulations and orders applicable to the conduct of the work (9).

This section also indicates that the construction manager reviews the work of trade contractors for deficiencies without assuming any of the architect/engineer's responsibilities for design and inspection.

AGC 520 General Conditions

Section 4.1 defines the construction manager and the extent of his authority as follows:

> Whether the trade contracts are between the owner and trade contractors, or the construction manager and trade contractors, it is the intent of these general conditions to allow the construction manager to direct and schedule the performance of all work and the trade contractors are expected to follow all such directions and schedules (10).

Section 4.1 goes on further to state that the construction manager will prepare schedules and direct the work with respect to such schedules. Section 4.3 gives the construction manager the right to stop work.

Although the above sections seem to give ultimate responsibility for direction of the project to the construction manager, Article 5 of the agreement seems to place most of this responsibility on the trade contractors.

> The trade contractor shall supervise and direct the work, using his best skill and attention. He shall be solely responsible for all construction means, methods, techniques, sequences, and procedures and for coordinating all portions of the work under the contract subject to the overall coordination of the construction manager (10).

Protection of persons and property is addressed in Article 11 of this agreement. The responsibility of the trade contractors and the construction manager for safety precautions and programs is spelled out as follows:

> The trade contractor shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the work. If the trade contractor fails to maintain the safety precautions required by law or directed by the construction manager, the construction manager may take such steps as necessary and charge the trade contractor therefor. The failure of the construction manager to take such action shall not relieve the trade contractor of his safety obligations (10).

AGC 5 Subcontract Agreement

The subcontractors responsibility for safety is indicated in Section 3.8:

> The subcontractor's shall comply with all federal, state and local laws, social security laws and unemployment compensation laws, workers compensation laws and safety laws insofar as applicable to the performance of this agreement. He shall also maintain his own safety program for compliance with such laws (11).

Engineer's Joint Contract Documents Committee (EJCDC)

There are three documents associated with the construction effort when using the EJCDC standard forms:

1) NSPE/PEPP-ACEC 1910-15 Standard Form of Agreement Between Owner and Project Manager for Professional Services

2) EJCDC 1910-1 Standard Form of Agreement Between Owner and Engineer for Professional Services

3) EJCDC 1910-8 Standard General Conditions of the Construction Contract.

The NSPE/ACEC project manager agreement is usually used where the architect/engineer both designs and manages the project. It can be modified to cover the pure form of

construction management by deleting services which would be provided by a design professional separate from the construction manager. Since the architect/engineer's responsibilities are included in NSPE/ACEC 1910-15, a review of EJCDC 1910-1 will not be included.

NSPE/PEPP-ACEC 1910-15 Owner/Project Manager Agreement

The project manager's responsibility for safety and execution of the work is qualified in Section 1.6.3.

> The resident project staff will direct its efforts toward providing greater protection for the owner that the completed project will conform to the contract documents, but neither project manager nor his staff shall be responsible for the means, methods, techniques or procedures of construction selected by contractors or for safety precautions and programs incident to the work of contractors or for any failure of contractors to comply with any laws, ordinances, rules or regulations applicable to the construction work or for any failures of the contractors to perform the construction work in accordance with the contract documents (12).

In regard to coordination between separate contractors, the construction manger is required to coordinate the sequence of operations and other relationships among the separate contractors and maintain liaison between them and the owner.

Although there is nothing requiring the project manager to regularly inspect the work, the first part of Paragraph 1.6.3 seems to indicate more than a casual observance of the construction process.

> Provide full-time resident project representation by resident project staff being present at the site at all times when the construction work is in progress in order to provide thorough experienced project management observation of the progress and quality of the construction work, to determine in general if it is proceeding in accordance with the contract documents, and to guard owner against defects and deficiencies in the work of contractors (12).

EJCDC 1910-8 General Conditions

The contractor's responsibility for supervision is indicated in section 6.1.

> Contractors shall supervise and direct the work competently and efficiently. Contractors shall be solely responsible for means, methods, techniques, sequences and procedures of construction (13).

Coordination of the work when more than one contractor is involved in construction is addressed in the following way:

> If owner contracts with others for the performance of other work on the project at the site, the person or organization who will have authority and responsibility for coordination of the activities among the various prime contractors will be identified in the supplementary conditions, and the specific matters to be covered by such authority and responsibility will be itemized, and extent of such authority and responsibilities will be provided in the supplementary conditions. Unless otherwise provided in the supplementary conditions, neither owner nor engineer shall have any authority or responsibility in respect of such coordination (13).

The engineer's responsibilities are similar to those identified for the project manager in the previous agreement, NSPE/ACEC 1910-15. EJCDC 1910-8 does specifically mention that the engineer will not be required

to make exhaustive or continuous on-site inspections to check the quantity or quality of the work.

There is a section in the agreement addressing safety which outlines the contractor's responsibilities as follows:

> Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the work (13).

Construction Management Association of America (CMAA)

The last set of standard agreements which will be reviewed are those recently developed by the Construction Management Association of America. The CMAA was formed in 1982 in an effort to provide uniformity among construction management firms. Suggested standards of practice were published in the "Manual of Standards of Practice" by the CMAA in June 1986. The contract documents identified in that manual which are to be used in conjunction with the agency form of construction management are:

1) CMAA Standard Form of Agreement Between Owner and Construction Manager (Agency Option) Includes CMAA Construction Manager Standard Scope of Service.

2) CMAA Standard Form of Agreement and General Conditions Between Owner and Trade Contractor (Agency Option). Not available until 1988.

3) CMAA Standard Form of Agreement Between Owner and Designer. Not available until 1988.

CMAA Owner/CM Agreement

The relationship of the construction manager to other project participants is defined in Section 1.4 as follows:

> In providing construction management services described in this agreement, the CM shall endeavor to maintain a working relationship with the contractors and design professionals on behalf of the owner. However, nothing in this agreement shall be construed to mean that the CM assumes any of the contractual or customary responsibilities or duties of the contractors or design professionals. The contractor is solely responsible for: construction means, methods, sequence and procedures used in the construction of the project and for the safety of his personnel and his operations, and for performing in accordance with the contractors agreement with the owner (14).

The construction manager's scope of services is indicated in an attachment to this agreement entitled "Construction Manager Standard Scope of Service." Nowhere in this portion of the agreement are the terms supervision or inspection used in describing the construction manager's responsibilities. However, the list of responsibilities related to on-site management during the construction phase clearly indicate that the construction manager's role on the construction site is far from casual observance and might be construed as that of an inspector or supervisor.

The responsibilities of the construction manager during the construction phase include:

1) Establish and implement coordination and communication procedures among the CM, owner, design professional, contractors and other appropriate parties.

2) Maintain daily job reports, logs, files, and other necessary documentation.

3) Conduct construction site meetings and overall coordination meetings with all contractors.

4) Coordinate technical inspection and testing provided by design professionals or other third parties.

5) Review and make recommendations as to disposition of progress payments.

6) Establish and implement a program to monitor the quality of the construction which purpose shall be to assist in guarding the owner against defects and deficiency in the work of contractors.

7) Monitor and expedite the progress of the work. Throughout this section of the agreement are many exculpatory clauses wherein the construction manager disclaims liability or responsibility for the work he is coordinating or reviewing.

Safety is never specifically addressed, except for the section which indicates that the contractor is solely responsible for the safety of his personnel and his operations.

Summary

A recurring statement throughout all of the documents is that the contractor shall be solely responsible for the construction means, methods, techniques, sequences and procedures, and for all safety precautions and programs.

The role of the construction manager in the actual construction process and supervision/direction of the work appears minimal. However, when viewed in its entirety each contract indicates a number of responsibilities for the construction manager which in effect require a certain degree of "inspection" and "supervision", even though these terms are never specifically mentioned.

It is important to note a section of the "Commentary for Project Management Agreement" prefacing the NSPE/ACEC 1910-15 Standard Form of Agreement Between Owner and Project Manager for Professional Services:

> Recent court decisions indicate the need for caution in respect of the possible treatment of the project manager as an employer under OSHA on the theory that the cumulative effect of all construction management functions at the job site can become so extensive that the project manager is, in reality, an integral part of the total construction effort and thus engaged in construction work at the site. Suffice to say that the greater the degree of control, direction or supervision exercised by the project manager over the construction process, the greater will be his chance of being considered part of the construction team with the consequent exposure to liability and regulation as such. Accordingly it is important that the project manager adhere carefully in practice to the statement that he will not be responsible for the means, methods, techniques, sequences or procedures of construction selected by contractors or for safety precautions and programs incident to the work of contractors (12).

Not all of the standard agreements completely exclude the construction manager from responsibility for the construction safety program. Both the AIA and AGC standard agreements place the construction manager in the role of

reviewer and coordinator of the safety programs of the trade contractors employed in the construction effort. The AGC contract documents give the construction manager the right to take whatever corrective steps are necessary. If the contractor fails to maintain the safety precautions required by the law or directed by the construction manager, the construction manager may charge the trade contractor for the cost of taking such corrective efforts. However, both contracts include contract language which implies that the contractor and not the CM will be responsible and liable for project safety. Table 2.1 provides a summary comparison of CM responsibilities.

TABLE 2.1 Comparison of CM Responsibilities in Standard CM Agreements

		Document			
		AIA	AGC	EJCDC	CMAA
CM	provides coordination of prime contractors (KTRs)	X	X	X	X
CM	to direct and schedule the performance of all work		X		
CM	not responsible for construction means, methods, techniques or procedures	X	X	X	X
CM	reviews work of trade KTRs for deficiencies	X	X	X	X
CM	reviews and processes progress payments	X			X
CM	has right to stop work		X		
KTR	responsible for initiating maintaining and supervising safety precautions and programs	X	X	X	X
CM	may take steps as necessary and charge the KTR if KTR fails to maintain safety precautions required by law or the CM		X		
CM	coordinates KTR safety programs	X			
CM	reviews KTR safety programs	X	X		
CM	provides facilities or performance of work not readily included in the separate trade contracts i.e. safety signs, barricades etc.		X		

Chapter 3

SAFETY MANAGEMENT PRACTICES OF EXISTING CM FIRMS

In order to develop a general idea about existing practices employed by construction management firms and their understanding of the liability associated with those efforts, a multiple choice questionnaire was sent to thirty-five firms. The firms are members of the Construction Management Association of America (CMAA) and are listed in Standard and Poor's Guide to Corporations. Replies were received from 10 of the firms. Five replies were from construction management firms who used the pure form of construction management 75-100 percent of the time (Group A) and five were from construction management firms who used the pure form of construction management only 0-25 percent of the time, (Group B).

Survey Design

The survey was designed to answer a number of safety management questions. Practices and attitudes were of interest. The general question areas were:

1) What are the predominate standard forms of agreement used?

2) Do firms retain or use safety professionals?

3) Who develops and enforces the safety program?

4) What is the firm's understanding of the existing legal environment in terms of its responsibility for safety and the strength of contract language?

5) What do the firms feel is the best way to avoid liability for safety?

The first part of the survey asked firms to answer questions concerning specific practices employed by the firm at the present time. The second part of the survey was more subjective and asked respondents to answer questions about their knowledge and perceptions of the existing legal environment, and to identify the approach to safety that they feel is best in terms of avoiding liability. A copy of the questionnaire can be found in the Appendix.

Standard Contract Forms

Most of the construction management firms indicated that they either used the AIA or a customized form of agreement between the CM and the owner. In many cases the customized form of agreement was based in part on the AIA agreement. One firm indicated that it used the CMAA suggested contract in the development of its own customized agreement.

The owner/contractor agreement was predominantly that suggested by AIA or some modification of the AIA agreement. One firm indicated the AGC suggested contract was used

while another indicated that a modified version of the EJCDC owner/contractor agreement was preferred.

Use of Safety Professional

Three of the five Group B firms retained a full time safety professional. One supplements in-house safety expertise two ways. First, their insurance carrier provides inspection and consultation services. Secondly, they take advantage of their state OSHA offer to inspect upon contractor's request without fault. The other two firms in this group indicated that safety is handled by a member or members of their firm as part of their overall responsibilities.

Only two of the five firms in Group A retained a full time safety professional. Of those two, one indicated that safety services were obtained on a consulting basis. The remaining firms indicated that safety is a part time responsibility.

Development and Enforcement of the Safety Program

A number of questions concerned the development and enforcement of the safety program and the degree of involvement in that program. Four of the five Group B firms indicated that the construction manager developed the program, in conjunction with the owner. Enforcement in these cases was also the responsibility of the construction manager, however two indicated that enforcement was also

provided by the insurance agency. These four firms were involved in the safety program, although two indicated their involvement was limited to coordination and providing safety inspections.

The last firm of this group indicated that the contractor developed the safety program and that enforcement was provided by the contractor, architect/ engineer and the insurance agency. Their involvement in the safety program was identified as minimal.

Two of the firms in Group A indicated that the development and enforcement of the safety program was solely a contractor responsibility and identified their approach to safety as one of minimal involvement. On the other hand, two firms in this group indicated that development and enforcement of the safety program was solely the construction manager's responsibility. Of these, one indicated that enforcement was limited to required weekly "tool box safety meetings," biweekly contractor meetings, and safety inspections by the superintendent followed by verbal or written notice of deficiencies to the contractor.

The remaining firm indicated that the safety program was developed by the contractor, based on contractual requirements created by the architect/engineer and the CM. Enforcement of the program was a contractor responsibility. The CM's approach to safety was described as one of minimal

involvement, basically limited to monitoring of the contractor's performance and compliance with contract requirements regarding safety. Contractor compliance could be enforced by the CM through payment withholding or threat of termination.

Understanding of the Existing Safety Environment

The remaining questions in the questionnaire were designed to ascertain the construction management firm's understanding of the project safety environment i.e., legal aspects, OSHA requirements, workmen's compensation, etc.

Responsibility for Safety

Only one of the five Group B firms clearly indicated that the CM was responsible for safety. Surprisingly, this was one of the firms which indicated that its involvement in the safety program was minimal. One of the firms, which did not indicate that the CM was responsible for safety, did mention that it felt that liability issues created a "no-win" situation for CM's and owners.

Three of five firms in Group B indicated that the CM could be cited for OSHA violations. Two of these also felt that an injured employee could only look to the contractor or owner for compensation for injuries sustained in a job related accident, but indicated that relief was not limited to workmen's compensation. The remaining two recognized the fact that an injured employee can legally look to any

member of the construction team for compensation and that his relief would not be limited to workmen's compensation, except in the case of his employer.

Only two companies in Group A indicated that the construction manager was responsible for safety. Except for one firm, all recognized that the CM could be cited for OSHA violations.

Two of the firms in Group A did not feel that an injured employee could legally look to the construction manager for compensation, but did recognize that the employee's relief was not limited to workmen's compensation. The remaining three indicated that any member of the construction team could be sued.

Strength of Contract Language

In addressing the strength of the contract language, one of the firms in Group B indicated that, if the contract language indicated the contractor would be fully responsible for safety, the courts would find the contractor liable, even if injury resulted from the negligence of other parties. They also felt that the best way to avoid liability was to disclaim responsibility for safety in the contract documents and ensure that the contract clearly spells out the safety responsibilities of all members of the construction team. The other firms placed less reliance on the contract language and

recognized that the findings of the courts would depend on the facts and circumstances surrounding the injury.

Two of the companies in Group B felt that the best way to avoid liability was to avoid any actions which might be construed as supervising the contractor employees, and to ensure that a viable safety program is implemented and adhered to by all parties involved in the construction effort. The other firms felt that the best way for the CM to avoid liability is to ensure that the contract documents spell out the safety responsibilities of all parties and to diligently carry out those duties specifically identified as the CM's responsibility. One of these indicated that the CM should also disclaim responsibility for safety in the contract documents but added the following:

> However, if you want to be a good CM, you better be involved. The worse action is no action. The next worse action is to simply write a nasty letter and hope the problem goes away. The best action is to see that the work conditions are kept safe ... this way you have shown an active, best effort as well as having kept accidents from occurring.

In addressing the strength of the contract language, all of the firms in Group A recognized that, regardless of contract clauses, the courts may find any of the parties to the construction effort liable for injuries sustained by an employee, depending on the circumstances surrounding those injuries. However, four of the five indicated that the best way to avoid liability was to disclaim responsibility

for safety in the contract documents, and to avoid any actions which could be construed as supervising the contractor's employees.

Of the four firms favoring disclaimers, one felt that the CM should also avoid any involvement in the safety program, indicating that the owners do not want to pay for the risks the CM would take if he were to get involved in the safety program. Another one felt, that in addition to the two conditions stated above, the CM should ensure that a viable safety program was implemented on the project. The other two (of the four indicating a reliance on the contract language) felt that to avoid liability the contract documents should clearly spell out the safety responsibilities of all members on the construction team, and that the CM should diligently carry out those duties specifically identified as the CM's responsibility.

One of these two did recognize that it was taking contradictory stances. On one hand, they wanted to absolve themselves of any responsibility for safety in the contract documents. On the other hand, they felt, for their own protection, they should try to reduce the potential for accidents, and show the courts that they made reasonable attempts to ensure contractor compliance with the safety requirements.

The remaining firm (of the five in Group A) indicated that the best way for the CM to avoid liability is to

develop and coordinate a comprehensive safety inspection program, and clearly spell out the safety responsibilities of the construction team members in the contract documents.

Summary

The survey is summarized in Table 3.1. In general, the results of the survey indicate that most of the construction management firms feel, that regardless of contract language to the contrary, the CM is exposed to some degree of liability for safety on the project site. However, their efforts to reduce liability are varied and often in direct opposition to the beliefs held about factors which influence liability exposure. Many of the firms place a great deal of reliance on the contract language and a position of minimal involvement as a means of avoiding liability for safety. Those firms doing the majority of their working using the pure CM approach seem to rely on these methods more than others.

A few of the firms have taken the position that the best defense to liability is a good offense. Each of these firms have, to varying degrees, indicated a reliance on involvement in a comprehensive safety program, coupled with detailed contract language which clearly indicates, as a means of avoiding liability, the responsibilities of all parties to the construction effort. These firms have recognized the importance of a quality safety program and

Table 3.1 Results of CM Firm Surveys

Firms reporting they:	% of firms
use some form of AIA, AGC, EJDCD or CMAA Standard Agreement	100%
retain services of full time safety professional	50%
participate in the development and enforcement of safety program	60%
feel that CM is responsible for safety	30%
recognize that CM can be cited for OSHA violations	70%
recognized that exculpatory contract language does not relieve CM of liability for safety	90%
feel that implementing an effective safety program may reduce liability exposure	50%
recognized maximum involvement in safety program as the best approach to liability avoidance	10%

feel that proper management of an effective program cannot be accomplished as an extra duty assigned to an existing employee. It must rather be managed by a full time safety professional.

Chapter 4

SAFETY LIABILITY

From the results of the survey discussed in Chapter 3 there seem to be two approaches suggested for the construction manager's role in the job site safety program. On the one hand, it is suggested that a completely "hands-off" approach be taken, since even a minimal involvement will probably subject the construction manager to an increased liability for the safety of all employees on the job site. On the other hand, it is suggested that the duties of the construction manager encompass activities which will inevitably subject him to liability for safety. Hence, the construction manager should take an active role in the safety program in an effort to reduce the possibility of accidents and injury.

Which approach is correct? While there are no definitive answers to this question, a look at a number of court decisions addressing the liability of construction managers, architects and general contractors for employee safety should provide some indication about which viewpoint is more apt to protect the interest of the construction manager, owner and employees.

Construction management is a relatively new profession. Therefore, in addition to cases involving construction managers, cases looking at the design

professional's liability for project safety will be reviewed, assuming that in most instances the legal precedence established in the design professional's case will also be applicable to the construction manager. Since the construction manager assumes some of the coordination and general supervisory responsibilities normally assumed by the general contractor, court decisions which indicate the safety liability of the general contractor will also be reviewed.

All of the court decisions will be analyzed for legal principles or judicial trends. These might indicate how the courts will view the construction manager's role in the construction process and the extent of liability for the safety of employees the courts will attach to that role.

Owner and General Contractor Liability

The discussion which follows is based on a review of court decisions in which the traditional method of construction was employed. This method utilizes a general contractor hired by the owner to perform the work through the use of the general contractor's and/or subcontracted forces.

Owner as Possessor of Land

The first issue to be addressed is the extent of liability placed on the owner as possessor of the land on which the construction is taking place. The owner's

responsibility for safety was addressed in Peterson vs. W.T. Rawleigh Company (15), a case in which the owner was found liable for injuries sustained by a delivery man who fell on an ice covered parking lot.

In this case, the court found that the owner or possessor of the land must anticipate the dangers posed to persons visiting or working on his property and make reasonable attempts to remove hazards or to provide adequate warning especially with regard to those persons who must use the property to conduct their business.

Employer of Independent Contractor

The next issue to be addressed is the rule of law which states that an employer of an independent contractor is not responsible for the negligence of the independent contractor (16). The strength of this rule was discussed in Widman vs. Roosmoor Sanitation Inc. (17). In this case a subcontractor's employee was killed when the sewer excavation walls collapsed, prompting initiation of an action against the owner and general contractor.

> The employer of an independent contractor is ordinarily not liable to third parties for the contractor's negligence. However, the general rule is subject to exceptions of such magnitude that they leave only a small area in which the common rule operates (17).

The exception which causes the most difficulty is the one that comes into effect as a result of the employer retaining control over the work.

Degree of Supervisory Control

A determination must be made as to whether the employer is maintaining sufficient control over the project to subject himself to liability. This determination is not a question of "law", but a question of "fact." The degree of supervisory control is properly addressed through a "finding of fact" by a jury. In many of the cases reviewed for this study either the owner or the general contractor were appealing a denial of the court for summary judgement in their favor. In all cases reviewed, the courts denied the appeal based on the rationale indicated above. A review of these cases indicated some of the factors which the court considered in determining the extent of control over the work retained by the owner and the general contractor, as well as the duties and responsibilities it sees as inherent in those roles.

In Thill vs. Modern Erecting Company (18), liability was defined as follows:

> An owner or general contractor remains liable for the torts of an independent contractor, even if he is not liable as master, if the owner or general contractor has retained the general control and supervision of the work and has failed to exercise reasonable care in doing so (18).

The court seems to indicate that the general contractor cannot escape liability by excluding itself from general control and supervision when it states:

> The general contractor, as a possessor of the land, has a duty to exercise reasonably careful supervision of all the activities on the land and may be liable for a breach thereof (18).

In this case, injuries suffered by an employee while working in the vicinity of a crane, which toppled, were chargeable to both the general contractor and the subcontractor even though the general contractor was not required to, nor did specifically direct, the actions of the subcontractor's employees. The general contractor knew of the crane operation and had the opportunity to observe that the crane was not set up properly.

The extent of control over a project necessary to establish liability of owner or general contractor, cannot be identified in a definitive manner. In Everette vs. Alyeska Pipelines Service Company, the court tried to develop criteria by which the extent of control of the employer could be determined (20).

> If employer which entrusted work to independent contractor reserved only right to direct order of performance, to inspect its progress, or to receive reports, it has probably not retained sufficient control to be subject to liability for physical harm to others for whose safety employer owes duty to exercise reasonable care. On the other hand, if employer retains right to direct manner of independent, contractors performance of its work or to superintend the work in any meaningful way, employer

> has retained sufficient control to be held liable (20).

From the case mentioned, it would seem that the employer or general contractor would have to exercise very direct supervision of the subcontractors to incur liability. However, the issue is not that simple.

In the case of Signs vs. Detroit Edison Company, Signs was electrocuted by a fellow employee, who inadvertently brought his crane into contact with one of the many Edison high voltage lines located at the electric power substation (22). The subcontractor for which Signs worked was performing work in the vicinity of the substation for a general contractor hired by Edison. An action was brought by the widow against Edison, the owner and the general contractor. The court felt that clarification about the extent of control required to incur liability was provided in McDonough vs. General Motors Corporation (23).

> An owner contracting to have construction work done on This property cannot reserve to himself the administration, inspection, assistance and other actions which do or may authorize some measure of influence or dominion over the way the work is to be done, and yet maintain as a matter of law, that such reservation shall not be construed as undertaking supervisory control of the work or the means or methods employed by the contractor.

The degree of supervisory control must be determined by considering more than just whether the owner or contractor exercised direct supervision over the

subcontractor. The type of work involved, the circumstances surrounding the work and the relationships between the contracting parties must all be considered.

It is interesting to note the court felt that the general contractor's placing an inspector on site, constituted a sufficient degree of control over the project to require the general contractor to exercise reasonable care for safety of the subcontractor's employees.

Owners and their agents must be careful that they, or their employees, do not do anything which might be construed as directly supervising the contractor's employees. They must be especially careful when visiting or inspecting the job site. However, the degree of control is not always related entirely to the degree of direct supervision employed.

In Disalvatore vs. United States, an action was initiated seeking recovery for the death of a construction worker who was killed when he fell down an elevator shaft in a building under construction (25). The accident occurred as a result of a government employee failing to resolve a dispute between two independent contractors, which in turn left the elevator shaft unprotected. The court maintained that the U.S. retained a sufficient degree of control over the work to assume liability since "once the dispute arose only the U.S. and not the contractor has

the right to determine who should be responsible for the replacement of protections."

The idea that certain parties are in a better position or the only one in a position to take appropriate precautions was brought out in Funk vs. General Motors Corporation (GM) (26). In this case, an action was initiated by an employee of a subcontractor against the general contractor and owner of the site of a construction project, for injuries sustained in a fall through the roof. In addressing the issue of responsibility for safety, the court recognized that each situation must be looked at individually and consideration given to all circumstances. The court felt that in the area of job safety, GM's knowing acquiescence in non-performance encouraged, if not legitimized, the derelictions of the subcontractor and general contractors.

Legislative Imposition of Liability

Some of the states have adopted rules which place liability for safety on the owner based on doctrines of "peculiar risk of harm" or "inherent danger." These doctrines require the employer to recognize situations or undertakings which are dangerous or risky. A peculiar risk was defined in Mackey vs. Campbell Construction Company (28).

The owner and general contractor appealed from a judgement, which awarded subcontractor's employee damages

for personal injuries sustained while moving a scaffold. Both the owner and the general contractor's representatives had doubts about the safety of the scaffolding and could have insisted that the scaffolding be broken down to a reasonable height before being moved.

> A peculiar risk within "peculiar risk of harm" doctrine exists where employer should recognize that a risk is likely to arise as a result of a method of work which employer knows that contractor will adopt; and peculiar risk may also arise out of a contemplated and unsafe method of work adopted by the independent contractor (28).

The court indicated that the more extensive the employers knowledge and experience, the more applicable is the rule.

In Widman vs. Roosmoor, the court found the owner liable for injuries sustained by subcontractor employees resulting from unshored trench wall failure (17). It felt that the unshored trench created an "inherently dangerous" situation that should have been obvious to the owner and the general contractor. The court also indicated that one of the reasons courts depart from the rule of nonliability of an employer for the torts of an independent contractor, is that the performance of the "duty of care" is one of great public importance.

Duty of Care

The "duty of care" which should be exercised is not a matter of law but is determined by a jury based on the facts. In Signs vs. Detroit Edison Company, the court gave

the following instructions to the jury concerning "negligence" and "ordinary care" (22).

> When I use the words negligence with respect to defendant's conduct, I mean the failure to do something which a reasonable person would do under the circumstances which you find existed in this case. It is for you to decide what a reasonably careful person would do or not do under such circumstances. When I use the words ordinary care, I mean the care that a reasonably careful person would use under the circumstances which you find existed in this case. The law does not say what a reasonably careful person would or would not do under such circumstances. That is for you to decide (22).

It would appear that in deciding the liability and responsibility of parties for safety, it is less a matter of law, and more a matter of the facts, circumstances and relationships inherent in the action before the court which governs the decision. The actions of the individuals will be scrutinized in terms of how reasonable and appropriate they are for the given situation.

A review of the way the court perceives the duties and responsibilities of the owner and general contractor with respect to safety of employees and subcontractors is important for two reasons. First, the situation is not all that much different from the owner, CM, independent contractor relationship, and is a framework from which the courts will probably view the CM arrangement. Second, since the CM in most cases is an agent of the owner, he will probably be expected by both the owner and the courts to assume some of those duties and responsibilities

normally assigned to the owner and general contractor for site safety. In fact in most cases, as with the owner/general contractor arrangement, suits are routinely brought against both the owner and the CM for negligence in proper safety supervision, regardless of the contract provisions assigning safety responsibility to the independent contractor.

Architect/Engineer Liability

The next general area of case law to review is the safety liability of the architect/engineer on traditionally managed construction projects. As with the general contractor's responsibilities, some of the responsibilities traditionally held by the architect/ engineer for project coordination, scheduling and inspection are assumed by the construction manager when the CM approach to project management is employed. Since construction management is a relatively new concept in the construction industry, there is little legal precedence established and the courts are likely to rely on precedence from cases where the traditional approach was employed, fitting the construction manager's duties and responsibilities to those held by the traditional construction team members.

In determining the liability of the architect/ engineer for safety, the main question seems to focus around the extent of control afforded to the architect/ engineer, in his responsibility to the owner to ensure that

the contractor complies with the terms of the construction contract. Since the terms of the construction contract include the contractor's responsibility for safety, it might be implied that the architect/engineer is responsible for ensuring that the contractor meets the safety requirements. Hence, any safety deficiencies on the job site which are a result of contractor negligence also implies negligence on the part of the architect/engineer for not enforcing this section of the contract requirements.

In Amant vs. Pacific Power and Light Company, the duties of the engineering firm included inspection to ensure that the contractor fulfilled the terms of its contract with the city, and the related safety provisions (29). The engineering firm had the power to shut down the job for safety violations.

An action was initiated by a crane operator against the electric company and engineering firm for injuries sustained when the operator received an electrical shock while laying a pipeline near overhead wires. Although the duty of the contractor for safety was clearly spelled out in the contract, the court refused a summary judgement for the engineering firm, indicating that the issue of negligence of the firm was clearly a question of fact and should be tried as such.

In Miller vs. Dewitt, an action was brought by a contractor's employee against the school district and the architect for injuries received as a result of the collapse of school gymnasium roof they were working on (30). In this case the architect's supervisory duties were spelled out as follows:

> Supervision of the work: The architect will endeavor to guard the owner against defects and deficiencies in the work of the contractors, but he does not guarantee the performance of their contracts. The supervision of an architect is to be distinguished from the continuous personal superintendence to be obtained by the employment of a clerk of-the-works (30).

The architect's enforcement of the above provision was possible through his authority to stop the work whenever necessary to ensure the proper execution of the contract. The contractor was responsible for taking all necessary precautions for the safety of employees on the job site.

The collapse of the roof was attributed to inadequate shoring during construction. The court felt that if the architects knew, or should have known, that the shoring was inadequate and unsafe, they had the right and duty to stop the work until the unsafe condition had been remedied. Since the shoring operation was obviously important, the jury could find from the evidence that the architects were guilty of negligence in failing to inspect and watch over the shoring operation.

A similar situation is found in Erhart vs. Hummonds, wherein an action was brought against the architects for the death of three workmen and injury of a fourth when the wall of an excavation caved in (31). The architects were paid an additional $12,000 by the owners to ensure that the terms of the contract between the owners and the contractors were complied with. The architect was given the authority to stop work whenever necessary to ensure the proper execution of the contract.

The field supervisor of the architect knew that the shoring for the excavation was unsafe, called his home office, and told them to contact the contractor and have a new job superintendent brought to the job at once. The new superintendent arrived the next day, Friday, and promised to have shoring taken care of by Monday. Over the weekend it rained, and collapse of the excavation occurred on Monday. The architects never stopped the work during this time. Although action was taken, the court did not consider it sufficient and found that the architects could be held liable for death and injury.

The major point to be gained from a review of these cases is that, regardless of the contract language indicating limitations to the supervisory or inspection responsibilities of the architect/engineer, the actual issue of the negligence and liability of the architect/engineer is a question of fact that must be

resolved by a jury. This resolution is made in light of the standard of "reasonable care" which professionals acting in such capacity must exercise. In all of the cases reviewed, accidents which did occur could have been prevented if the architect/engineer had exercised his authority to correct situations or conditions which might foreseeably cause injury or death to employees.

Construction Manager Liability

As noted earlier, construction management is a relatively new concept in the construction industry, hence there are only a limited number of court decisions establishing legal precedence in the area of the safety liability of the construction manager. Many of these court decisions rely on legal precedence established for cases concerned with the more traditional methods of construction project management.

Theory of Negligence

A review of several cases indicates that in most instances, actions are brought against the construction manager on the theory of negligence, which allows an injured worker to seek damages against third parties "not in the same employ." With the negligence theory, privity of contract is not required to assess tort liability. The main determination is whether the construction manager acted with "reasonable care." The two contractual duties

considered in raising the question of the extent of supervision or care required of the construction manager, are the authority to stop work on the project, and whether the engineer knew of the dangerous condition causing or leading to the accident.

In Riggins vs. Bechtel, a contractor's employee brought an action against Bechtel, the construction manager, for personal injuries sustained as the result of an uncorrected trip hazard made known to Bechtel prior to the accident (32). Bechtel was to coordinate and monitor the contractors' implementation of their safety programs, and conduct periodic safety inspections with the contractors' safety supervisors. Bechtel could stop contractor operations until noncompliance was remedied. The court found that Bechtel acted as an agent of the owner with respect to safety of any employee on the job site, and owed a duty of reasonable care to contractor's employees, even though Bechtel did not employ the contractor directly.

A similar situation was found in Lemmer vs. IDS Properties in which Turner Construction was hired as the construction manager with duties similar to those of a general contractor (33). Turner's safety director monitored the activities of the subcontractors to see that safe construction practices were followed by:

1) Holding safety meetings.

2) Posting safety posters.

3) Making periodic inspections of the site.

4) Investigating accidents in order to prevent future similar occurrences.

One of the subcontractor's employees (Lemmer) was injured when improperly constructed scaffolding collapsed on him. The owner (IDS), who was being sued by Lemmer, claimed that Turner had a duty to do more in this instance than just those items mentioned above.

The court found that the failure of Turner to inspect an area of construction that it knew was hazardous, and its failure to warn employees of the subcontractors of danger, or to keep them from entering the area, was sufficient to sustain the finding that the construction manager was negligent and at fault for the employee's injury.

Court's View of Construction Management

In a number of the construction management cases reviewed, there appeared to be a tendency for the court to view the construction manager as if he were a general contractor. In Kenny vs. Fuller, Kenny, an employee of a structural steel contractor brought suit against Fuller, the construction manager, for injuries sustained when he fell approximately 35 feet while working on the construction of a new building (34). The owner contracted directly with the independent contractors, designating Fuller as its representative. As the owner's representative, Fuller was to coordinate all aspects of the

project, including the establishment and implementation of a comprehensive safety program for the project.

The court relied on Corollo vs. Tishman Construction and Research Company to answer the question of whether a construction manager can be held to be a contractor, for purposes of determining liability for safety. The court examined the parties contractual obligations, and determined that the "construction manager" was substantially in charge of, and in supervisory control of, the work site. Significant to that determination was the construction manager's contractual obligation which was:

> To provide design consultation on the project; to monitor project costs; to schedule the project efficiently for both design development and construction phases; and to review the design of the project (35).

Fuller's agreement was very similar to this one. The court found that "a construction manager such as Fuller is precisely what the term denotes, i.e., an entity which manages or supervises all phases of the construction project." Fuller was considered to be equivalent to a "contractor" with non-delegable duties under safety provisions of the labor law. It did not matter that Fuller did not have any direct supervisory authority with respect to the job site employees.

In Corollo vs. Tishman, the construction manager contended that it was not acting as a general contractor,

but was simply an expediter, not subject to the absolute duties imposed upon contractors, owners and their agents by the labor law for employee safety. It is interesting to note the court's response to this contention:

> Although labeled construction manager in its contract with the owner, the duties actually assigned to and performed by the CM in connection with the project rather than any title assigned to it, are controlling for these purposes. The CM is aptly characterized here as a "contractor" based upon the duties it contracted to do, and did actually perform, in that a contractor, whether a general contractor, supervising contractor or expediter is one who coordinates and/or supervises the project for an owner, assuming the on-the-job responsibilities of the owner as its alter-ego. The mere fact that the CM is not paid a lump sum to cover all the services it renders, but only a flat fee to supervise and be responsible for a project does not in any respect, exclude it from any duties imposed on a "contractor" by the labor law or public policy underlying it (35).

In Bechtel Power Corporation vs. Secretary of Labor, Bechtel, acting as the construction manager for the project, was cited for exposure of its employees to violations of OSHA on the construction site (36). Bechtel contended that it was not subject to OSHA since its employees were not performing the actual work of construction, but merely administered and coordinated all phases of the construction. The commission found that since Bechtel's functions as a CM were an integral part of the total construction, it was "engaged in construction work" within the meaning of the regulations.

From the above it is obvious that the courts do not apply any preconceived definition to the term "construction manager." Rather, the courts look at both the contractual obligations and actual actions of the parties involved in determining the extent of responsibility and liability of the party claiming construction manager status. The construction manager may find himself liable for employee safety even if he has no direct supervisory authority and limits his control of the project to coordination and administration. Although the construction manager may try to avoid the appearance of, or the duties and responsibilities of, a general contractor, the courts do recognize similarities between the two and may attach similar legal liability and status to them.

Indemnity

In order to avoid legal liability for injury to persons or property, many standard contracts include indemnity clauses which basically "hold harmless" one or more parties to the contracting agreement. For example, the contractor may indemnify and hold harmless the owner, architect and CM from and against all claims, losses and expenses arising out of or resulting from the performance of the work, caused in whole or in part by any negligent act or omission of the contractor, subcontractor or anyone directly or indirectly employed by any of them. The following provides a review of a few cases from the

standpoint of indemnification, to determine how effective such contract clauses are in shielding the parties to the contract from liability.

Effect of Workmen's Compensation Laws

Workmen's compensation laws can effect the scope and validity of contract indemnity clauses. Since workmen's compensation laws vary from state to state, their effect is not always the same. In Riggins vs. Bechtel, the court found that the contractor could not indemnify Bechtel (the construction manager) against any claims brought by the contractor's own employees (32). The workmen's compensation act basically provides the employee only one means of compensation from the employer, which is that provided by the act itself. Bechtel could not be held harmless for injuries to the contractor's employees since this would limit the amount of compensation an employee could receive to that provided by workmen's compensation.

Degree of Contribution

In Minnesota the question of whether indemnity should be granted to one party by another centers on the degree of contribution either party had as to the cause of the injury or accident.

> The rule recognized in Minnesota is that one may have indemnity to the full extent of a liability if the other party's negligence is the primary cause of injury to a third party, and if the other party owes a duty to the one seeking indemnity. The rule does not

> apply if negligence is concurrent. In this case the issue of contribution comes into play (18).

Strength of Contract Language

Although there may be some cases or situations which are decided otherwise, in general the courts honor the contract language developed and agreed upon by the parties concerning indemnification. In Hogeland vs. Sibley, the court in addressing the issue of indemnification indicated that, absent a contract of adhesion, the intention of the parties as expressed in the contract language would be enforceable (38).

In Corollo vs. Tishman, the subcontractor contended that contract provisions entitling the construction manager to 100% indemnification were void as being against public policy (35). The court found otherwise and enforced the contract language agreed upon the parties. A similar finding was provided in Cumberbatch vs. Board of Trustees.

> A party is permitted to indemnify himself for his partial negligence, as well as his total negligence, the only restriction being that the intent to do so must clear and unequivocal (37).

In addition to express agreements, parties may impliedly agree to indemnify each other because of their obligation to perform their duties in a professional or workmanlike manner.

Summary

When looking at the legal liability of the construction manager, the different roles he assumes in the construction process must be considered. As the agent of the owner, the CM "stands in" for the owner. Other times he performs those duties normally associated with either the general contractor or the architect/engineer. In each of these roles the CM not only assumes the responsibilities of these parties, but also the liability normally afforded to them. The owner is responsible for providing a safe workplace, the general contractor adequate supervision and safety management, and the architect/engineer reasonable professional care in the execution of his duties.

A number of areas were addressed concerning the liabilities of the contracting parties for construction site safety. These are summarized as follows:

1) The owner as possessor of land must anticipate the dangers posed to persons visiting or working on his property, and make reasonable attempts to remove the hazards or provide adequate warning.

2) The general rule that an employer of an independent contractor is not responsible for the independent contractor's negligence, is subject to so many exceptions, that the general rule is all but invalid. The most important exception from the construction manager's standpoint is the one that places liability on the owner,

if he maintains sufficient control over the project. The owner may be considered to have sufficient control merely by retaining the right to administer, coordinate and inspect the construction effort.

3) Certain parties may be liable for injuries because they are in a better position, or the only one in a position to take appropriate precautions actions.

4) Some states have adopted rules which place liability for safety on the owner in certain circumstances, regardless of the degree of supervisory control exercised by the owner or his representative.

5) The architect/engineer must exercise reasonable care in the performance of his duties, and may be liable to persons who may foreseeably be injured by his failure to exercise such care, regardless of privity.

6) Architect/engineers are often responsible to ensure contractor compliance with the contract plans and specifications. If the contract includes the contractor's responsibility for safety, the architect/engineer may be held liable for injuries resulting from the contractor's noncompliance with contractual safety provisions.

7) The theory of negligence allows an injured worker to seek damages against third parties not in the same employ. Privity of contract is not required to assess tort liability.

8) With respect to safety, the court may view the construction manager the same as it would a general contractor, even when the construction manager is merely acting as an expediter, project coordinator or administrator, with no direct supervisory responsibilities.

Table 4.1 provides a summary of those factors affecting the CM's assumption of liability for safety. Many of the factors identified which increase the CM's degree of liability assumption are inherent in the type of work the CM normally performs. It is the contention of the writer, that rather than trying to avoid the factors which increase liability, the CM should concentrate on incorporating those factors which decrease liability assumption into his operating procedures.

In reviewing the court cases, one central theme or idea continued to prevail in the judicial process. Issues of safety are not a matter of law but rather a "question of fact", properly tried before a jury. In deciding a "question of fact", the jury must look at all of the surrounding circumstances and agreements, including the contract language, action of the parties, type of hazard, experience of employees, and professional responsibilities. The contract language alone will not decide who is, or should be, responsible for the injuries incurred. It is but one part of the jury's considerations. Having the contract language place all of the responsibility and risk

TABLE 4.1 Factors Affecting CM Assumption of Safety Liability

Factors Increasing CM Liability Assumption

1. CM fails to exercise reasonable care in performance of his duties.
2. CM is in best position or only one in position to correct safety deficiencies.
3. CM is contractually responsible for safety program review, coordination and/or development.
4. CM retains supervisory control over the work. (Supervisory control includes administration, coordination and inspection of the construction effort).
5. CM acts as a general contractor.
6. CM had or should have had knowledge of a safety deficiency.
7. CM works in a State with unconditional liability laws.

Factors Decreasing CM Liability Assumption

1. CM makes every reasonable effort to prevent and correct safety deficiencies.
2. A safety program is in place on the jobsite which decreases the possibility of accidents.
3. CM contract clearly highlight safety responsibilities of all parties to the construction effort.
4. CM contract includes an indemnification clause indemnifying CM for negligence of others.

on the contractor, is no guarantee that other parties to the contract will be completely exculpated from safety liability to injured third parties.

> By the very nature of his role in the management of a project, the CM must exercise some degree of general supervision over site activities. In so doing, he becomes the natural target of criticism (justified or not) when safety problems arise (39).

In light of the legal precedence discussed above, it would seem prudent that the CM shield himself from liability, not through the use of the exculpatory language within the contract, but by ensuring that an adequate safety program is operative on the construction site.

Chapter 5

OSHA REQUIREMENTS

In this chapter OSHA requirements which identify the critical elements of a comprehensive safety program are reviewed, and those safety related services which must be provided by various members of the construction team are highlighted. Additionally, the requirements which define the administrative environment in which a construction manager must operate are examined. As a result the degree of responsibility for safety the construction manager must assume when working within that environment is defined.

Background

The Occupational Safety and Health Act of 1970 was signed by President Nixon on December 29, 1970 and became effective on April 28, 1971. The act requires compliance with the promulgated safety and health standards. The federal agency responsible for the regulations and the enforcement of the act is the Occupational Safety and Health Administration (OSHA) acting under the Department of Labor. Although there are a number of other laws and regulations governing project safety, OSHA is the key agency on the majority of construction projects.

The act affects almost every employer in the United States. In construction this includes all the members of the construction team; architect/engineer, owner,

contractor, construction worker, construction manager and subcontractors. Although the act consists of complex rules and regulations defined in numerous references incorporated into the basic document which first established the act, the general intent of the act is very simple and straight forward. Employers should basically:

1) Furnish a place of employment which is free from recognized hazards that could cause or are likely to cause death or serious physical harm.

2) Comply with safety and health standards promulgated under the act.

The employee also has the responsibility to comply with the safety and health standards and all rules, regulations and orders issued pursuant to the act which are applicable to his own conduct and actions.

The safety and health standards promulgated by OSHA are strictly enforced. Failure to meet the standards or comply with provisions of the act can result in large fines or imprisonment. Significant costs are generally associated with correction of deficiencies noted in the citations issued by the OSHA inspector. Prudent management dictates that close attention be paid to compliance with all of the requirements of the act.

From the case studies in Chapter 4, it is evident that the courts often view the construction manager as a "contractor" or "employer" even if the construction manager

has no direct supervisory authority over the employees and is merely administering and coordinating the construction work. In this context the construction manager becomes responsible for compliance with OSHA regulations. In the sections that follow, the basic requirements of the act as it relates to the construction industry will be reviewed, particularly with respect to job sites with multiple employers.

OSHA Standards

The OSHA standards which are applicable to the construction industry are 29 CFR 1900-1926 which includes 29 CFR 1910 (General Standards) and 29 CFR 1926 (Construction Standards). The construction industry standards are found in OSHA publications 2207, revised in February 1983. The standards cover all aspects of construction safety either directly or by reference. In addition to the correction of physical deficiencies, there are specific requirements defined for inspections, record keeping, safety signs and training. These requirements are mandated by law and violations do result in citations and fines.

Enforcement

Enforcement of standards is facilitated through a system of inspections, citations, and penalties which include fines and incarceration. Inspections can be made

by either federal or state compliance officers. The frequency or likelihood of an inspection is based on the following set of priorities for investigation established by the Department of Labor (5):

1) Investigation of a fatality or of a catastrophic event (one that results in hospitalization of five or more employees).

2) Investigation in response to valid complaints from employees.

3) Investigation of industries involved in the target industry program and target health hazards program (those industries with the worst safety records nationally).

4) General inspections to provide representative coverage. Factors include geographical location, size and type.

Since there are not enough compliance officers to inspect all businesses and industries affected by the act, enforcement is mainly effected through a "voluntary compliance principle" similar to that employed by the IRS in the enforcement of income tax regulations. The possibility of inspection always exists and the penalties for noncompliance should be substantial enough to act as a deterrent. The maximum fines and penalties which can be assessed to the employer are provided in Table 5.1.

TABLE 5.1 OSHA Maximum Fines and Penalties (5)

Violation	Fines	Penalties
Serious	$1000	-
Uncorrected Deficiency	$1000/day each day past specific dates	-
Failure to exercise Reasonable Diligence in Detecting Violations	$1000	-
Willfully or Repeatedly Ignoring any Obligation, Standard, Rule, Order etc.	$1000	-
Subsequent Willful Violation that Causes Death	$20,000	1 yr prison
False Statement, Representation in Document, File or Record	$10,000	-
Advance Notice of Inspection Without Authorization	$1000	6 mos prison
Violation of Posting Requirements	$1000	-
Killing, Assaulting or Resisting Federal Law Enforcement Officers in Performance of Official Duties	$5-10,000	3-10 yr prison

Multi-Employer Work Sites

Construction sites managed under the pure form of construction management discussed earlier, involve a number of independent contractors, each of which is considered an employer. In addition, the court cases reviewed indicate that at times the owner and construction manager may also be considered as employers. OSHA has developed guidelines for inspectors to use when inspecting multi-employer work sites which assist the inspector in the determination of responsibility and the issuance of citations (42).

Citations are normally issued to the employer who is primarily responsible for the safety and health of the employees. In most cases this is the employee's immediate employer. However, if the immediate employer has a legitimate defense, the citation will be issued to the controlling employer. The controlling employer is considered to be the employer who is in the best position to correct the hazard or ensure it's correction. The controlling employer is cited "even though no employees of that employer are exposed to the violative condition."

To establish a legitimate defense the immediate employer must meet the following criteria:

1) The employer did not create the hazard.

2) The employer did not have the authority or ability to correct the hazard.

3) The employer made a reasonable effort to persuade the controlling employer to correct the hazard.

4) The employer instructed his employees about how to avoid or minimize the dangers associated with the hazardous conditions and, where feasible, pursued alternative means of protecting employees from the hazard short of walking off the job (except when special circumstances require such extreme action).

In many cases where it is not possible to determine if the immediate employer meets all of the criteria specified above, citations may be issued to both the immediate and the "controlling" employer.

Future OSHA Requirements for the Construction Industry

Rather than a relaxation of the safety regulations governing construction sites, employers can expect the standards to become even tougher in the near future. A bill, drafted by the AFL-CIO Building and Construction Trades Department, has been introduced in the House of Representatives which places greater demands on employers to comply with safety requirements and provides more safeguards for employees. The proposal, called the "Construction Industry Safety and Health Improvement Act of 1987" would (43):

1) Require construction employers to register with the Occupational Safety and Health Administration before beginning a project.

2) Require the construction employer to get permits from OSHA for trenching and excavation work five feet or deeper, the erection of scaffolding more than three stories high, demolition of buildings or structures more than three stories high, and operations involving exposure to asbestos.

3) Require construction employers to certify their safety and health programs, as well as their safety representatives, with an agency designated by the National Institute for Occupational Safety and Health.

4) Require annual safety training for all nonsupervisory employees (30 hours per year) and supervisory employees (60 hours per year).

5) Require employers to create a labor-management safety and health committee when a project uses more than 20 employees. The committee would be responsible for investigating accidents to confirm employer reports, inspecting the workplace, and reviewing employer safety and health programs.

6) Permit unlimited access to any site where a reportable accident or death has occurred.

7) Require that specific sanitation facilities are available on-site.

OSHA would establish a directorate of construction to oversee the entire program. The new requirements would place an extra burden on the employer administratively, but

should improve the quality of the safety programs found on most construction sites.

Summary

The Occupational Safety and Health Act, enacted in 1970, has had a significant impact on the safety posture of all industries including the construction industry. Some may not agree with all of the provisions of the act or the methods of enforcement employed. However, the basic purpose of the act, to provide a safer working environment for all employees, is easily recognized and accepted as a worthwhile goal that all employers should be striving to attain. Employers who do not recognize the value of compliance with the act will inevitably be subjected to inspections and citations leading to stiff penalties in the form of fines and/or imprisonment.

The OSHA standards contain many requirements that must be compiled with by employers. In the case of a steel plant or factory, the employer is easily identified and his responsibilities are clearly defined. This is not the case on a construction site, particularly one that employs the pure form of construction management. On the construction site there are many employers, areas of overlapping responsibility and most importantly areas in which responsibility is not easily defined. OSHA recognizes this and provides guidelines for inspectors who must inspect

multi-employer activities and issue citations for noncompliance.

The multi-employer guidelines provided to inspectors should be of particular interest to owners and construction managers. They allow the inspector to cite "controlling employers" rather than the immediate employers if the immediate employer can establish a legitimate defense. The defense is basically predicated on the assumption that the controlling employer is in the best position to correct the hazard or ensure its correction. On a construction site with multiple independent contractors, hazards may also exist which are not clearly the responsibility of any one contractor. In this case the owner and/or the construction manager would probably be in the best position to rectify the situation and could be cited as a "controlling employer" under the OSHA inspector's multiple employer guidelines.

It is evident that compliance with OSHA regulations, particularly on a multiple employer job site, requires a comprehensive, coordinated safety program. On construction projects this program should include all parties to the construction effort. Responsibilities of each member should be clearly spelled out and enforced through provisions in the contractual agreements. At this point in time, such comprehensive programs are basically a management prerogative. However, there are movements by

the labor unions to improve the administrative safety efforts on construction sites. These changes would make comprehensive safety programs a mandatory requirement in the near future.

Chapter 6

SAFETY PROGRAM ELEMENTS AND RESPONSIBILITIES

This chapter will examine the basic elements of a comprehensive safety program on construction projects using construction management. The focus will be on the elements and the division of responsibilities between construction team members. It is not the intent of this report to develop a specific safety program for use on construction management sites, since each site will present its own peculiarities which will influence the program developed. Rather, the major elements which should be included in the safety program will be identified and recommendations made as to which members of the construction team should be responsible for the tasks associated with those elements.

Alternative Approaches

There are a number of ways in which a safety program can be developed on a construction site using the construction management mode. In his article on construction management and safety, Gans defines seven alternate approaches (44).

1) Contractor Only- individual contractors provide a safe work environment. No sitewide coordination or safety professional exists.

2) CM Assist- employee safety rests with individual contractors. A CM safety professional on staff coordinate site safety.

3) CM Direction- contract provides for CM to direct sitewide safety program.

4) Owner Representative- owner safety professional, separate from the CM, actively directs safety program.

5) Safety Consultant- owner employs safety consulting organization.

6) Safety Corporation- participants form and finance a special corporation to manage the site safety program.

7) Owner wrap up insurance- overall insurance coverage to include worker's compensation, general liability, auto for all project participants. May be applied in conjunction with one of the other approaches.

The type of safety approach used on the construction site should be the one which ensures that all of the essential elements of an effective safety program are provided. The previous chapters indicate that the best means of avoiding liability is to take reasonable precautions aimed at preventing accidents, thereby reducing or avoiding the subsequent lawsuits that arise as a result of the job site injuries incurred. It is important that responsibilities for the various essential elements of the safety program are assigned to the members of the

construction team who are in the best position to carry out the associated duties involved.

Elements of an Effective Safety Program

Every safety program, regardless of the industry involved, must include certain elements if it is to be effective in the control of accidents on the job site. The most important inputs which contribute to an effective safety program are (57):

1) Safety Training-Employees must be aware of all of the hazards associated with their work and safety rules and regulations which govern their activity. They must be taught the correct way to perform their work, including the proper use of personal protective equipment, and they must be corrected when performing a job unsafely. Management and safety professionals should be kept up-to-date with the latest safety standards and regulations so that instruction remains current.

2) Safety Inspections-Physical surroundings are a major source of accidents. Scheduled planned safety inspections should be conducted to locate existing and developing unsafe conditions so that they can be corrected prior to becoming a hazard.

3) Accident Investigation-All accidents should be thoroughly investigated to determine the underlying cause and preventative measures which should be taken.

4) Safety Rules Policies-Guidance must be established for all employees to follow. Compliance must be mandatory and strictly enforced.

5) Record Keeping-An accurate accounting of all job related accidents should be maintained. In addition to being required by law, these records form a historical data base which can be used to spot trends or identify areas requiring closer inspection and supervision.

6) Safety Equipment-Personal protective equipment should be of sufficient supply so that it is readily available to all employees when required.

7) Safety and Health Committee-Each place of employment should have a safety and health committee made up of individuals representing both the labor force and management. This group should meet regularly and review accidents sustained during the period, deficiencies and status of corrective efforts, new policies and initiatives, and assess the adequacy of the existing safety program.

8) Management Involvement-All members of the management team must take an active interest in the safety program if it is to succeed. Each manager must understand his responsibilities in regard to safety and must be held accountable for his success or failure to adequately meet those responsibilities. Management attitude towards safety will greatly influence the attitude of the employees.

All of the elements described above should be incorporated into the safety program on a construction site. Every member of the construction team must be involved in the safety program if all the items listed above are to be fully implemented. Looking back at the seven alternate approaches to safety suggested by Gans it is obvious that not all of the approaches provide the comprehensive coverage essential to an effective safety effort.

Comparison of Approaches

The first approach, "contractor only" provides no central or site wide coordination and relies entirely on the contractor for providing a safe work environment. All other management personnel are excluded from any participation in the safety program. There are no provisions for resolution of conflicts, and the assignment of responsibility for overlapping areas of responsibility and areas not adequately covered by any one contractor. The effectiveness of a number of separate contractor safety programs acting independently of one another on the same jobsite is questionable. Unfortunately, this seems to be the approach that is suggested for CM managed projects by the contract language found in the standard forms of agreement studied in Chapter 2 of this report.

The other six approaches identified by Gans appear to be attempts to provide a source of overall coordination for

the site safety program. These approaches recognize the fact that, absent the general contractor, some other member of the construction team must assume the role of coordinator and administrator for the independent prime contractors. Each approach is a viable alternative to project safety management.

The "CM assist" approach tries to involve the CM in project safety without exposing him to increased liability. Contractually the contractor is still held fully responsible for safety. The type of services performed are very similar to the "CM direction" approach but the CM is not given the contractual authority to enforce safety rules and policies. The CM can bring safety discrepancies to the contractor's attention but does not specify the nature of the corrective action.

. If the CM is going to assume an active role in safety management, he should be given the authority necessary to effectively carry out his duties. Since the CM's safety professional may be the only safety professional at the job site in most cases, he should be used not only to identify problem areas, but also to provide recommendations for corrective action and enforcement of contractor compliance. The "CM direction" approach provides those additional benefits, but still holds the contractors primarily responsible for the safety of the workers.

If the owner has the in-house capability, he may wish to place his own employees on the jobsite to act as safety professionals. With this approach, the CM's exposure to liability will be reduced but not entirely eliminated. The CM is on the job site everyday and is intimately involved with the total construction effort. The extent of his involvement in the construction effort makes him a potentially valuable participant in the accident prevention program.

The remaining approaches depend on outside assistance for safety expertise and management. Safety services are contracted from firms which specialize in safety management. Through careful selection of a firm, adequate safety coverage can be provided to employees on the job site. It must be recognized however, that contracted safety firms are concerned with safety only, and will not be very interested in productivity and economy. There is a good possibility, therefore, that "reasonable" alternatives will not be considered and job progress may be hindered or delayed.

Safety Responsibilities of Construction Team Members

The "CM direction" approach requires participation by all members of the construction team. Safety must be considered in all phases of the project, from design to project completion. The CM provides the coordinating link between the parties involved in each step of the overall

process. Each member of the construction team, i.e. owner, architect/engineer, construction manager and contractor, has certain areas of responsibility associated with each of the successive project phases. A successful safety program requires a clear delineation of responsibilities for the CM and the contractors.

Construction Manager

The CM, as the owner's representative, will provide the overall coordination and direction of the safety program. Typical functions related to this role include:

1) Review plans and specifications to ensure that applicable safety provisions have been included.

2) Review bidder's work safety records and safety qualifications.

3) Review and approve contractor safety programs.

4) Resolve safety problems involving more than one contractor.

5) Provide regular safety training to supervisors.

6) Organize and chair the safety and health committee.

7) Organize and direct periodic safety meetings which include representatives of each contractor on the project site.

8) Conduct periodic inspections of the job site to identify physical deficiencies. Coordinate corrective action.

9) Act as a safety liaison to all federal and state inspectors and agencies.

10) Develop overall safety programs and policies which clearly indicate the responsibilities of every individual involved on the project.

11) Provide periodic observations of construction work in progress for compliance with all safety regulations.

12) Review and conduct accident investigations. (Most accident investigations will be conducted by the contractor unless follow up investigation is deemed necessary by the CM.)

13) Review contractor reports documenting in-house safety training and indoctrination, inspections etc.

14) Implement motivational elements (posters, newsletters, signs, awards etc.).

15) Prepare and maintain required accident records and reports. Request and coordinate inputs of contractors as necessary.

16) Provide first aid training and facilities.

17) Provide and maintain fire fighting equipment, training programs, fire bills, liaison with local fire departments, etc.

18) Investigate complaints of safety violations.

19) Maintain on-site library of applicable safety publications.

The CM's objective in participating in the safety program is not to relieve the contractor of his basic responsibility for the safety of his employees, but to provide the assistance and expertise necessary to cover those areas which each contractor is not in a position to cover himself.

Contractor

In the "CM direction" approach the contractor still plays a major role in the safety effort. The contractor directly supervises the employees and has the greatest amount of influence over their behavior and practices. Each contractor must develop a safety program which governs his own areas of responsibility. As a minimum, the contractor should:

1) Comply with the CM safety program and policies, including attendance at all safety meetings.

2) Develop and submit safety program for CM review and approval.

3) Appoint a qualified representative with full authority to act on all matters relating to accident prevention.

4) Provide personal protective equipment to all employees and enforce the use of such equipment.

5) Provide safety indoctrination to all new employees.

6) Provide periodic safety training to all employees. Instruct workmen in safe work practices and work methods at the time his employees are given work assignments. Identify special precautions that should be taken and special hazards associated with the assignment. Emphasize the proper use of personal protective equipment.

7) Ensure that all foremen are trained in first aid.

8) Ensure that supervisors attend CM sponsored safety training.

9) Promptly investigate all accidents and injuries.

10) Comply with the requirements of all codes, rules and regulations relating to the contractor's operations.

12) Develop housekeeping procedures which keep the work area relatively clean and free of excess debris.

13) Plan work to protect against personal injury and property damage.

14) Schedule safety inspections of the machinery, equipment and job site to detect potential safety hazards.

15) Develop safety inspection checklists to facilitate field efforts.

16) Initiate corrective actions for identified safety deficiencies.

17) Notify CM of safety deficiencies attributable to other contractors, or in areas outside the contractor's responsibility or corrective capabilities.

18) Periodically observe employee work practice for possible violations of safety codes, rules or regulations.

19) Investigate employee complaints of unsafe working conditions.

20) Conduct regularly scheduled "in-house" safety meetings.

21) Maintain copies of applicable safety publications on jobsite for reference by supervisory personnel.

22) Cooperate with other contractors on the job site.

The contractor must be continually reminded that he, and not the construction manager, is primarily responsible for safety. The success or failure of the entire safety program is mainly dependent on the contractor's efforts and his attitudes towards safety management.

Foreman

The individual that may be the most critical to the safety effort is the foreman. Job foremen are an essential part of an effective safety program. Their efforts towards accident prevention will have a significant influence on the frequency with which injuries occur on the job site. The foreman can influence the work habits of the employees by the example he sets in his own work habits and the attitude he conveys to the worker concerning safety. Most accidents can be prevented if the foreman sets a good

example, is knowledgeable in the area of safety and proper work practices, and integrates safety into the work assignments. The contractor's safety plan should recognize the important role of the foreman in accident prevention.

Summary

There are certain essential elements which should be included in every effective safety program. Of the alternative approaches to safety available on a pure CM managed site, the "CM direction" approach is the approach which best encompasses all of those elements. In the "CM direction" approach, the construction manager actively directs a site wide safety program for the benefit of all contractors and employees. This approach requires the full participation of all members of the construction management team. The main objective of the construction manager is to provide assistance and expertise in areas the contractors are not in a position to adequately cover, are outside the scope of the contractor's responsibility or for which responsibility isn't clearly defined. Although the construction manager directs the overall safety program and can enforce contractor compliance, the contractor still remains primarily responsible for the health and safety of his own employees.

Chapter 7

RECOMMENDATIONS

This study has addressed the various issues and concerns which affect the risks to parties posed by their involvement or lack of involvement in the safety effort on a construction project. The basic premise from the start was that there are risks and costs associated with either stance. Both must be weighed against all possibilities, before a choice is made concerning the degree of participation and responsibility the construction manager should assume for the project safety program. Table 7.1 provides a summary of recommendations provided in this chapter concerning the CM's approach to project safety management.

Liability of the Construction Manager

The construction manager's best way to avoid liability is to become an active participant in the safety program. First, by becoming more involved in the safety effort, the construction manager improves the overall quality and effectiveness of the program, thereby reducing the accident rate and his exposure to third party lawsuits. Second, if an accident does occur and the construction manager is sued, he has a better chance of proving that he exercised

TABLE 7.1 Summary of Recommendations Concerning CM's Approach to Project Safety Management

1. The CM should include safety program administration and management as one of the services offered to the owner, emphasizing the economic incentives of a well managed safety program.

2. As a minimum, the CM should be developing the overall safety program and policies, resolving safety problems involving more than one contractor, conducting periodic inspections, and organizing and directing periodic safety meetings.

3. The contract language employed in standard CM forms of agreement should indicate the special safety services each party to the construction effort must provide.

4. Indemnity clauses should be included in standard CM forms of agreement, such that the contractor indemnifies the CM from claims which result from damages, for which the contractor's negligence is the sole or major cause.

"reasonable" or "ordinary" care in the execution of his duties, thereby reducing the chance that he will be found negligent by the jury.

Contract Language

It is important that the contract language be as specific as possible with regard to safety duties and responsibilities. The standard forms of agreement in Chapter 2 are not very specific and tend to make use of exculpatory language to protect the construction manager, architect/engineer and owner. Exculpatory language should not be used to cover poorly written specifications, or as the sole means of reducing or eliminating exposure to liability.

With respect to safety, the duties and responsibilities of the contractor, construction manager, architect/engineer and owner should be clearly spelled out in the various contractual agreements. The identification of authority figures, reporting and inspection procedures, attendance and composition of safety meetings, cleanliness of site, enforcement of safety provisions, and issuance and replacement of personal protective equipment are some of the issues that should be addressed in the contract documents. There should be no question as to individual responsibilities. Chapter 6 of this report can be used as a guide in the identification of individual responsibilities which should be included in the

contractual agreements entered into by the owner, construction manager, independent contractors and architect/engineer.

By specifically spelling out the requirements of each party in the contractual agreement, the courts have less freedom to interpret the intent of the parties. In this way, the drafter of the contract can have a greater degree of assurance that the responsibilities intended for each party will be recognized, honored and enforced by the courts.

Each party should fully understand what responsibilities it is agreeing to accept, prior to consummating the contract. If the contract language concerning safety, and the assumption of risk for safety, is vague, the parties may not be fully prepared to perform the functions necessary to ensure an adequate safety program is in effect.

Indemnity Clauses

Indemnity clauses must be carefully worded to ensure that the full effect will be recognized and honored by the courts. The drafter must be concerned that the burden placed on the contractor does not make it impossible or economically impractical to obtain insurance coverage.

Chapter 4 indicated that, in general, the courts honor the contract language developed and agreed upon by the parties concerning indemnification. Exceptions are

normally a result of indemnification clauses which have the effect of limiting the recovery for injuries sustained by an employee.

It is recommended that the indemnity clause be worded so that the contractor indemnifies all other parties on the construction site for claims which result from damages for which his negligence is the sole or the major cause. The contractor should not be required to indemnify others for damages which arise mainly as a result of their own negligence. The extent of the contractor's liability should be unlimited with respect to injuries to persons as a result of his own negligence, but limited to the amount of the deductible for damage to property covered by an existing insurance policy.

OSHA Requirements

It is evident that the construction manager may, under certain circumstances, be cited for OSHA violations. The best defense is to implement an effective safety program on the job site and work to correct or eliminate as many safety deficiencies as possible. Since OSHA penalties are not covered by insurance there is an economic and personal incentive for all parties involved in the construction project to insist on a unified safety effort.

At this point, most administrative aspects of the safety program are a management prerogative. However, there are movements by the construction industry's labor

unions to make many of these voluntary prerogatives mandatory requirements, all falling under the auspices of OSHA regulation and enforcement. Construction management firms should look to the future and develop a plan of implementation which incorporates safety program administration into their package of management services provided to owners.

Elements of Safety Program

Of all of the construction manager safety responsibilities identified in Chapter 6, there are a few services which the CM should provide on every construction project.

1) Develop the overall safety program and policies, clearly indicating the responsibilities of every individual involved in the project.

2) Conduct periodic inspections of the job site to identify physical deficiencies.

3) Resolve safety problems involving more than one contractor.

4) Organize and direct periodic safety meetings which include representatives of each contractor on the project site.

Each of these services is important since they are services which, if not provided by the construction manager, would not be provided at all. Each service provides the coordination of the multiple prime

contractor's safety efforts. Coordination is necessary to ensure that a viable safety program is in effect and has full participation of all members.

It is recommended that the construction manager include safety administration as one of his regular services offered to owners. Management of the safety program should be considered a function which is just as important and necessary to the successful completion of a construction project as scheduling, estimating and contract administration.

Safety Management Practices of Existing CM Firms

The results of the survey of construction management firms indicated that those firms doing the majority of their work using the pure CM approach rely on exculpatory language and a position of minimal involvement as a means of avoiding liability for safety. The evidence presented in this report indicated that such a position provides a "false sense of security" to construction managers. The courts do not look favorably on the "hands-off" approach being used by those in a position which should reasonably require some degree of participation.

Some of the firms surveyed have recognized this and have developed an approach to safety based on the principle that the "best defense" is a "good offense." One of these firms felt that the best way for the CM to avoid liability is to develop and coordinate a comprehensive safety program

including all parties to the contract, manage an aggressive safety inspection program, and clearly spell out the safety responsibilities of the construction team members in the contract documents. It is recommended that all construction management firms adopt a similar "offensive" approach as a means of defending against increasing liability exposure, providing a more comprehensive management package to owners, and realizing increased economic and social returns inherent in an effective safety program.

Suggested Topics for Further Research

Insurance

A study investigating risk allocation and exposure for a construction project using the pure CM approach with the possible insurance arrangements would prove beneficial not only to construction managers, but to all members of the construction team. The study could look specifically at a construction project employing the pure CM approach where the construction manager is an active participant in the development, administration and enforcement of the project safety program.

Safety Program Enforcement

If the construction manager is to assume some responsibility for safety program management, he must be afforded the means and power to enforce compliance with the

program regulations and objectives. An analysis of the tools and methods available for enforcing contractor compliance, including their effectiveness and applicability to the pure CM approach should be conducted. Enforcement techniques need not be limited to systems involving punishment for violations, but might also include systems which provide positive incentives to contractors for taking the proper preventative measures.

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APPENDIX

CM SAFETY ORGANIZATION AND MANAGEMENT QUESTIONNAIRE

CM Safety Organization and Management

1. Which form of Owner/CM agreement does your firm normally employ?
   a. AIA
   b. AGC
   c. EJCDC
   d. CMAA
   e. Other (Please specify)

Comments:

2. Which form of Owner/Contractor agreement do owners that your firm works with normally employ?
   a. AIA
   b. AGC
   c. EJCDC
   d. Other (Please specify)

Comments:

3. Does your firm retain a full time safety professional?
   a. Yes
   b. No. Safety related concerns are handled by a member or members of the firm as part of their overall responsibilities.

Comments:

4. Does your firm obtain safety services on a consulting basis?
   a. Yes

b. No. All Safety services are provided in-house.

Comments:

The following questions related to construction projects on which pure CM approach is utilized (i.e. the owner contracts directly with a number of independent contractors rather than with a general contractor. CM acts as agent to the owner, administering and coordinating the construction effort). You may circle more than one answer when appropriate.

5. What percentage of the construction projects that your firm participates in use the pure form of construction management?

   a. 0-25%

   b. 25-50%

   c. 50-75%

   d. 75-100%

Comments:

6. Who develops the safety program on your firm's CM managed construction projects?

   a. Owner

   b. Contractor

   c. Architect/Engineer

   d. Construction Manager

   e. Consulting Firm

Comments:

7. Who enforces the safety program?

   a. Owner

   b. Contractor

   c. Architect/Engineer

   d. Construction Manager

   e. Insurance Agency

Comments:

8. Which of the following would you say best describes your firm's approach to safety?

   a. Minimal involvement. Basically a contractor's responsibility.

   b. Develop and coordinate the overall safety program for the project.

   c. In addition to coordination, provide safety inspections and punchlist of deficiencies.

   d. Responsible for both development and enforcement of the safety program.

Comments:

Please answer the following questions based on your present understanding of the safety environment (i.e. legal aspects, OSHA requirements, workmen's compensation, etc.)

You may circle more than one answer where appropriate.

9. On a construction project using the pure CM approach who is responsible for safety?

   a. Owner

b. Contractors

c. Subcontractors

d. Architect/Engineer

e. Construction Manager

Comments:

10. On a construction project using the pure CM approach, who can be cited for OSHA violations?

a. Owner

b. Contractors

c. Subcontractors

d. Architect/Engineer

e. Construction Manager

Comments:

11. On a construction project using the pure CM approach who can an injured contractor employee legally look to. for compensation (employee injured in job related accident)?

a. Owner

b. Contractor

c. Architect/Engineer

d. Construction Manager

Comments:

12. Is a contractor employee's relief for injuries sustained in a job related accident limited to workmen's compensation coverage?

a. Yes. The Law limits the employee's coverage to those benefits provided by workmen's compensation.

b. No. The employee can sue for additional compensation.

Comments:

13. If the contract language indicates that the contractor will be fully responsible for safety, which of the following is true?

a. Injured employees can only look to the contractor for relief.

b. Courts will find the contractor liable even if injury results from negligence of other parties.

c. Other parties to the contract are exculpated from responsibility for safety.

d. All of the above.

e. None of the above.

Comments:

14. In order to avoid liability for safety the construction manager should:

a. Disclaim responsibility for safety in the contract documents.

b. Avoid involvement in the contractor's safety program.

c. Avoid any actions which could be construed as supervising contractor employees.

d. Develop and coordinate a comprehensive safety program including all parties to the contract.

e. Manage an aggressive safety inspection program.

Comments:

15. Which of the following statements do you consider to be most accurate concerning the avoidance of liability for safety?

a. In order to avoid liability, the CM should limit his involvement in the safety program as much as possible and emphasize in the contract documents that safety is solely a contractor responsibility.

b. In order to avoid liability, the CM should ensure a viable safety program is implemented on the project and that all parties adhere to the program established.

c. In order to avoid liability, the CM should ensure that the contract documents clearly spell out the safety responsibilities of all members of the construction team, and diligently carry out those duties specifically identified as the CM;s responsibility.

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